Lymphedema makes limbs more susceptible to infection which is often difficult to treat and leads to further tissue damage and lymph stasis. Patients should take great care to avoid any trauma (e.g. shaving, venipuncture, or acupuncture). I advise people with lymphedema to use protective gloves when performing housework and gardening. If wounds do occur I encourage prompt cleansing and a call to the physician for possible early antibiotics. Other advise I give is to avoid having blood pressure measurements taken in the affected arm, avoid wearing tight-fitting jewelry (rings, bracelets etc.) and carrying heavy loads, and keeping the extremity still and dependent for prolonged periods. Elastic bandages or compression garments are helpful when flying or driving for prolonged periods.

Despite all these cautions I encourage my patients to lead active lives which remembering that they do have a chronic condition and common sense can keep them from developing further problems.

Sylvia M Ramos
717 Encino Place N.E.,
Suite#14,
Albuquerque NM 87102

Why do people yawn?

Remarkably little interest has been paid to yawning in research, even though it is an everyday phenomenon. Observation suggests that yawning is a semivoluntary act associated with boredom and fatigue, and it seems to be contagious in a room of similarly affected people. But why do fetuses yawn, and what is the physiological purpose of yawning?

The yawning reflex can be triggered by drugs or by psychological, hormonal, or neurological stimuli. Yawning occurs at as early as 15 weeks in an embryo, and newborn babies usually yawn shortly after they take their first breath. All vertebrates yawn, and yawning persists in people who are in a vegetative state. Such universality suggests that yawning has a defensive or protective function.

The reflex arc is thought to be in the reticular system of the brain stem, and it involves the respiratory neurons in the medulla; the motor nuclei of the 5th, 7th, 10th, and 12th cranial nerves; the phrenic nerves; and the motor supply to the intercostal muscles. Neurological lesions tell us much about the functioning of the brain; they confirm that the yawning center is part of the reticular system because people with pontine lesions who cannot open their mouths at will are able to yawn in response to appropriate stimuli. The reticular complex is closely connected to cortical areas, the subcortical limbic center, and the hypothalamus, which explains why boredom, fatigue, and the act of observing others yawning can provoke the reflex through the prefrontal associative area.

Endorphins play an important role in yawning. Apomorphine, a dopaminergic receptor agonist, so reliably stimulates yawning that apomorphine-induced yawning is used as a test of the integrity of dopaminergic function in patients with neurological disorders such as Parkinson's disease. Increased serotoninergic activity also induces yawning, acting in concert with cholinergic influences. This increase in cholinergic activity acts through negative feedback to decrease serotonin and noradrenaline concentrations and thereby reducing the tendency to sleep. Yawning, therefore, has an alerting, antisleep effect, which is probably enhanced by the generalized stretching movements that often accompany a yawn.

Yawning can be induced in those who are not bored just by thinking about it.

Studies have shown that yawning predicts a subsequently increased level of activity. However, the rate of yawning is not dependent on the amount of previous sleep or the time of waking or retiring to bed. More yawning occurs during the week than at weekends.

Yawning is a feature of some pathological states. The frequency of yawning is reduced in Parkinson's disease, and it may occur more often in epilepsy and in states of opiate withdrawal. In patients who have had a stroke affecting the pyramidal tract in the internal capsule region, stretching movements of the hemiplegic arm may occur during spontaneous or apomorphine induced yawning. Yawning induced cerebral ischemia (in the form of a transient ischemic attack) in a patient who had undergone bypass surgery when the accompanying vigorous movement of the jaw muscle occluded the temporal and middle cerebral arteries. In comatose patients the onset of yawning predicts the imminent return of wakefulness.

Yawning has been associated with a minor degree of hypoxia in patients with cerebrovascular disease. This has led to the idea that the function of yawning is to generate a large inspiration to overcome borderline hypoxia and hypercapnia. If this were true, the incidence of yawning would be reduced by breathing high concentrations of oxygen and would be increased by raising the partial pressure of carbon dioxide. Studies have shown that this does not occur, and yawning is not a major clinical feature in patients with acute or chronic ventilatory failure.

From a behavioral point of view, when yawning seems to be contagious, similar external stimuli (or the lack of stimuli) are likely to affect all of those present. However, yawning can be induced in those who are not bored just by thinking about it. These socioenvironmental influences indicate a communicative function, and the reflex may act as a nonverbal cue in generating social cohesion.

We can probably conclude that yawning has an important role as an arousal mechanism to maintain alertness and defend against the onset of sleep. It can be affected by a range of behavioral influences, but much still needs to be learned about this everyday activity.

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Anita K Simonds
Department of Respiratory Medicine,
Royal Brompton Hospital,
London SW3 6NP